

SEQUENCE LISTING

<110> Renner, Wolfgang A.
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<120> Ordered Molecular Presentation of Antigens, Method of
Preparation and Use

<130> 1700.0030002

<140> US 09/449,631

<141> 1999-11-30

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<160> 88

<170> PatentIn Ver. 2.1

<210> 1

<211> 41

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 1

ggggacgcgt gcagcaggta accaccgtta aagaaggcac c

41

<210> 2

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 2

cggtggttac ctgctgcacg cgttgcttaa ggcacatgta gcgg

44

<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 3

ccatgaggcc tacgataccc

20

<210> 4
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 4
ggcactcacg gcgcgcttta caggc 25

<210> 5
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 5
ccttctttaa cggtggttac ctgctggcaa ccaacgtggt tcatgac 47

<210> 6
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 6
aagcatgctg cacgcgtgtg cggtggtcgg atcgcccggc 40

<210> 7
<211> 90
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 7
gggtctagat tccaaccat tcccttatcc aggccttttg acaacgctat gctccgcgcc 60
catcgtctgc accagctggc ctttgacacc 90

<210> 8
<211> 108
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 8
gggtctagaa ggaggtaaaa aacgatgaaa aagacagcta tcgcgattgc agtggcacag 60
gctggtttcg ctaccgtagc gcaggccttc ccaaccattc ccttatcc 108

<210> 9
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 9
cccgaattcc tagaagccac agctgccctc c 31

<210> 10
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 10
cctgcggtgg tctgaccgac accc 24

<210> 11
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 11
ccgcggaaga gccaccgcaa ccaccgtgtg ccgccaggat g 41

<210> 12
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 12
ctatcatcta gaatgaatag aggattcttt aac 33

<210> 13
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Modified ribosome
binding site

<400> 13
aggaggtaaa aaacg 15

<210> 14

<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: signal peptide

<400> 14
Met Lys Lys Thr Ala Ile Ala Ile Ala Val Ala Leu Ala Gly Phe Ala
1 5 10 15
Thr Val Ala Gln Ala
20

<210> 15
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: modified Fos
construct

<400> 15
Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu
1 5 10 15
Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu
20 25 30
Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly Gly Cys
35 40 45

<210> 16
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: peptide linker

<400> 16
Ala Ala Ala Ser Gly Gly
1 5

<210> 17
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: peptide linker

<400> 17
Gly Gly Ser Ala Ala Ala
1 5

<210> 18

<211> 256
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion construct

<400> 18
gaattcagga ggtaaaaaaac gatgaaaaag acagctatcg cgattgcagt ggcactggct 60
ggtttcgcta ccgtagcgca ggcctgggtg ggggcggccg cttctggtgg ttgcggtcgt 120
ctgaccgaca ccctgcaggc ggaaaccgac caggtggaag acgaaaaatc cgcgctgcaa 180
accgaaatcg cgaacctgct gaaagaaaaa gaaaagctgg agttcatcct ggcggcacac 240
ggtggttgct aagctt 256

<210> 19
<211> 52
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Fos fusion construct

<400> 19
Ala Ala Ala Ser Gly Gly Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala
5 10 15
Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
20 25 30
Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
35 40 45
His Gly Gly Cys
50

<210> 20
<211> 261
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<220>
<221> CDS
<222> (22)..(240)

<400> 20
gaattcagga ggtaaaaaaac g atg aaa aag aca gct atc gcg att gca gtg 51
Met Lys Lys Thr Ala Ile Ala Ile Ala Val
1 5 10
gca ctg gct ggt ttc gct acc gta gcg cag gcc tgc ggt ggt ctg acc 99
Ala Leu Ala Gly Phe Ala Thr Val Ala Gln Ala Cys Gly Gly Leu Thr
15 20 25
gac acc ctg cag gcg gaa acc gac cag gtg gaa gac gaa aaa tcc gcg 147
Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala
30 35 40

ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa gaa aag ctg gag 195
Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu
45 50 55

ttc atc ctg gcg gca cac ggt ggt tgc ggt ggt tct gcg gcc gct 240
Phe Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
60 65 70

gggtgtgggg atatcaagct t 261

<210> 21
<211> 73
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 21
Met Lys Lys Thr Ala Ile Ala Ile Ala Val Ala Leu Ala Gly Phe Ala
1 5 10 15

Thr Val Ala Gln Ala Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu
20 25 30

Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala
35 40 45

Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His
50 55 60

Gly Gly Cys Gly Gly Ser Ala Ala Ala
65 70

<210> 22
<211> 196
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<220>
<221> CDS
<222> (34)..(189)

<400> 22
gaattcagga ggtaaaaaga tatcgggtgt ggg gcg gcc gct tct ggt ggt tgc 54
Ala Ala Ala Ser Gly Gly Cys
1 5

ggg ggt ctg acc gac acc ctg cag gcg gaa acc gac cag gtg gaa gac 102
Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp
10 15 20

gaa aaa tcc gcg ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa 150
Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys
25 30 35

gaa aag ctg gag ttc atc ctg gcg gca cac ggt ggt tgc taagctt 196
Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly Gly Cys
40 45 50

<210> 23
<211> 52
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 23
Ala Ala Ala Ser Gly Gly Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala
1 5 10 15
Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
20 25 30
Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
35 40 45
His Gly Gly Cys
50

<210> 24
<211> 204
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 24
gaattcagga ggtaaaaaaac gatggcttgc ggtggtctga ccgacaccct gcaggcggaa 60
accgaccagg tggaagacga aaaatccgcg ctgcaaaccg aaatcgcgaa cctgctgaaa 120
gaaaaagaaa agctggagtt catcctggcg gcacacggtg gttgcggtgg ttctgcggcc 180
gctgggtgtg gggatatcaa gctt 204

<210> 25
<211> 56
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 25
Lys Thr Met Ala Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr
1 5 10 15
Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn
20 25 30
Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly
35 40 45
Gly Cys Gly Gly Ser Ala Ala
50 55

<210> 26
<211> 26
<212> PRT
<213> Homo sapiens

<400> 26
Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Ala Phe Gly Leu Leu
1 5 10 15
Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala
20 25

<210> 27
<211> 262
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 27
gaattcaggc ctatggctac aggctcccgg acgtccctgc tcctggcttt tggcctgctc 60
tgctgacct ggcttcaaga gggcagcgct ggggtgtggg cggccgcttc tgggtggtgc 120
ggtggtctga ccgacacct gcaggcggaa accgaccagg tggaagacga aaaatccgcg 180
ctgcaaaccg aaatcgcgaa cctgctgaaa gaaaaagaaa agctggagtt catcctggcg 240
gcacacggtg gttgctaagc tt 262

<210> 28
<211> 52
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 28
Ala Ala Ala Ser Gly Gly Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala
5 10 15
Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
20 25 30
Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
35 40 45
His Gly Gly Cys
50

<210> 29
<211> 261
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fos fusion
construct

<220>
<221> CDS
<222> (7)..(240)

<400> 29
gaattc atg gct aca ggc tcc cgg acg tcc ctg ctc ctg gct ttt ggc 48
Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly
1 5 10
ctg ctc tgc ctg ccc tgg ctt caa gag ggc agc gct tgc ggt ggt ctg 96
Leu Leu Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Cys Gly Gly Leu
15 20 25 30
acc gac acc ctg cag gcg gaa acc gac cag gtg gaa gac gaa aaa tcc 144
Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser
35 40 45
gcg ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa gaa aag ctg 192
Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu
50 55 60
gag ttc atc ctg gcg gca cac ggt ggt tgc ggt ggt tct gcg gcc gct 240
Glu Phe Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
65 70 75
gggtgtggga ggcctaagct t 261

<210> 30
<211> 78
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Fos fusion
construct

<400> 30
Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
1 5 10 15
Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Cys Gly Gly Leu Thr Asp
20 25 30
Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu
35 40 45
Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe
50 55 60
Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
65 70 75

<210> 31
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 31

cctgggtggg ggcggccgct tctggtggtt gcggtggtct gacc 44

<210> 32
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 32
ggtgggaatt caggaggtaa aaagatatcg ggtgtggggc ggcc 44

<210> 33
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 33
ggtgggaatt caggaggtaa aaaacgatgg cttgcggtgg tctgacc 47

<210> 34
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 34
gcttgcggtg gtctgacc 18

<210> 35
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 35
ccaccaagct tagcaaccac cgtgtgc 27

<210> 36
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 36
ccaccaagct tgatatcccc acaccagcg gccgcagaac caccgcaacc accg 54

<210> 37
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 37
ccaccaagct taggcctccc acacccagcg gc 32

<210> 38
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 38
ggtgggaatt caggaggttaa aaaacgatg 29

<210> 39
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 39
ggtgggaatt caggcctatg gctacaggct cc 32

<210> 40
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 40
ggtgggaatt catggctaca ggctccc 27

<210> 41
<211> 59
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 41
gggtctagaa tggctacagg ctcccggacg tccctgctcc tggcttttgg cctgctctg 59

<210> 42
<211> 58

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 42
cgccaggcctc ggcactgccc tcttgaagcc agggcaggca gagcaggcca aaagccag 58

<210> 43
<211> 402
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Modified bee
venom phospholipase A2

<220>
<221> CDS
<222> (1)..(402)

<400> 43
atc atc tac cca ggt act ctg tgg tgt ggt cac ggc aac aaa tct tct 48
Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Lys Ser Ser
1 5 10 15

ggt ccg aac gaa ctc ggc cgc ttt aaa cac acc gac gca tgc tgt cgc 96
Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg
20 25 30

acc cag gac atg tgt ccg gac gtc atg tct gct ggt gaa tct aaa cac 144
Thr Gln Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His
35 40 45

ggg tta act aac acc gct tct cac acg cgt ctc agc tgc gac tgc gac 192
Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp
50 55 60

gac aaa ttc tac gac tgc ctt aag aac tcc gcc gat acc atc tct tct 240
Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile Ser Ser
65 70 75 80

tac ttc gtt ggt aaa atg tat ttc aac ctg atc gat acc aaa tgt tac 288
Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr
85 90 95

aaa ctg gaa cac ccg gta acc ggc tgc ggc gaa cgt acc gaa ggt cgc 336
Lys Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg
100 105 110

tgc ctg cac tac acc gtt gac aaa tct aaa ccg aaa gtt tac cag tgg 384
Cys Leu His Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp
115 120 125

ttc gac ctg cgc aaa tac 402
Phe Asp Leu Arg Lys Tyr
130

<210> 44

<211> 134
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: Modified bee
 venom phospholipase A2

<400> 44
 Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Lys Ser Ser
 1 5 10 15
 Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg
 20 25 30
 Thr Gln Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His
 35 40 45
 Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp
 50 55 60
 Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile Ser Ser
 65 70 75 80
 Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr
 85 90 95
 Lys Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg
 100 105 110
 Cys Leu His Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp
 115 120 125
 Phe Asp Leu Arg Lys Tyr
 130

<210> 45
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 45
 ccatcatcta cccaggtac

19

<210> 46
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 46
 cccacacca gcggccgcgt atttgccgag gtcg

34

<210> 47
 <211> 36

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 47
cggtggttct gcggccgcta tcattctacc aggtac 36

<210> 48
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 48
ttagtatttg cgcaggtcg 19

<210> 49
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 49
ccggctccat cggtgcag 18

<210> 50
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 50
accaccagaa gcggccgcag gggaaacaca tctgcc 36

<210> 51
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 51
cggtggttct gcggccgctg gctccatcgg tgcag 35

<210> 52
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 52

ttaaggggaa acacatctgc c

21

<210> 53

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 53

actagtctag aatgagagtg aaggagaaat atc

33

<210> 54

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 54

tagcatgcta gcaccgaatt tatctaattc caataattct tg

42

<210> 55

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 55

gtagcaccca ccaaggcaaa gctgaaagct acccagctcg agaaactggc a

51

<210> 56

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 56

caaagctcct attcccactg ccagtttctc gagctgggta gctttcag

48

<210> 57

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 57
ttcgggtgcta gcggtggctg cgggtggctg accgac 36

<210> 58
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 58
gatgctgggc ccttaaccgc aaccaccgtg tgccgcc 37

<210> 59
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: JUN amino acid
sequence

<400> 59
Cys Gly Gly Arg Ile Ala Arg Leu Glu Glu Lys Val Lys Thr Leu Lys
1 5 10 15
Ala Gln Asn Ser Glu Leu Ala Ser Thr Ala Asn Met Leu Arg Glu Gln
20 25 30
Val Ala Gln Leu Lys Gln Lys Val Met Asn His Val Gly Cys
35 40 45

<210> 60
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: FOS amino
acid sequence

<400> 60
Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu
1 5 10 15
Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu
20 25 30
Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly Gly Cys
35 40 45

<210> 61
<211> 33
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 61
ccggaattca tgtgcggtgg tcggatcgcc cgg 33

<210> 62
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 62
gtcgctaccc gcggctccgc aaccaacgtg gttcatgac 39

<210> 63
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 63
gttggttgcg gagccgcggg tagcgacatt gacccttata aagaatttgg 50

<210> 64
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 64
cgcgccccaa gcttctacgg aagcgttgat aggatagg 38

<210> 65
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 65
ctagccgcgg gttgcggtgg tcggatcgcc cgg 33

<210> 66
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 66
cgcggtcccaa gcttttagca accaacgtgg ttcattgac 38

<210> 67
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 67
ccggaattca tggacattga cccttataaa g 31

<210> 68
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 68
ccgaccaccg caaccgcgg ctagcggaag cggtgatagg atagg 45

<210> 69
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 69
ctaattgatc cggtgggggc tgcggtgggc ggatcgcccg gctcgag 47

<210> 70
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 70
gtcgtacctc gcggctccgc aaccaacgtg gttcatgac 39

<210> 71
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 71
ccggaattca tggacattga cccttataaa g 31

<210> 72
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 72
ccgaccaccg cagccccac cggatccatt agtaccacc caggtagc 48

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 73
gttggttgcg gagccgcggg tagcgacctg gtagtcagtt atgtc 45

<210> 74
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 74
cgcggtcccaa gcttctacgg aagcggtgat aggatagg 38

<210> 75
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 75
ctagccgcgg gttgcggtgg tcggatcgcc cgg 33

<210> 76
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 76
cgcggtcccaa gcttttagca accaacgtgg ttcattgac 38

<210> 77

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 77
ccggaattca tggccacact tttaaggagc 30

<210> 78
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 78
cgcgtcccaa gcttttagca accaacgtgg ttcattgac 38

<210> 79
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 79
ccggaattca tggacattga cccttataaa g 31

<210> 80
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 80
cctagagcca cctttgccac catcttctaa attagtagcc acccaggtag c 51

<210> 81
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 81
gaagatggtg gcaaagggtg ctctaggagc ctagtagtca gttatgtc 48

<210> 82
<211> 38
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 82

cgcggtcccaa gcttctaaac aacagtagtc tccggaag

38

<210> 83

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 83

gccgaattcc tagcagctag caccgaattt atctaa

36

<210> 84

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 84

ggttaagtcg acatgagagt gaaggagaaa tat

33

<210> 85

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 85

taaccgaatt caggaggtaa aaagatatgg

30

<210> 86

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 86

gaagtaaagc ttttaaccac cgcaaccacc agaag

35

<210> 87

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 87

tcgaatgggc cctcatcttc gtgtgctagt cag

33

<210> 88

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Fos fusion
construct

<400> 88

Glu Phe Arg Arg

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